

J. W. HYATT.
Lead Pencil.

No. 238,908.

Patented March 15, 1881.

Fig. 1.

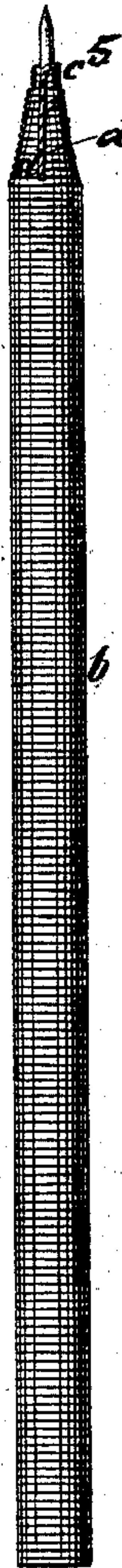
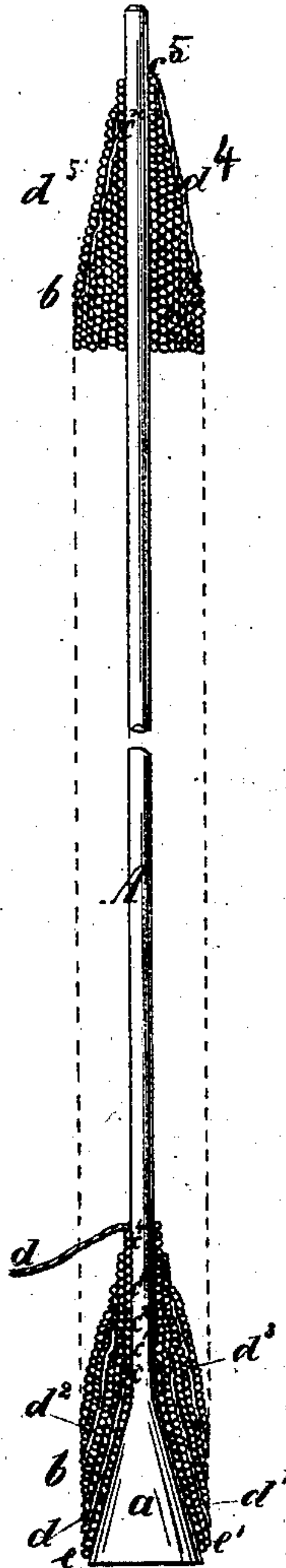


Fig. 2.



Witnesses:

Otto Hufeland,
Hugo Brueggemann.

Inventor.

John W. Hyatt,
by
Van Santvoord & Hauff,
his attorneys.

UNITED STATES PATENT OFFICE.

JOHN W. HYATT, OF NEWARK, NEW JERSEY.

LEAD-PENCIL.

SPECIFICATION forming part of Letters Patent No. 238,908, dated March 15, 1881.

Application filed May 2, 1877.

To all whom it may concern:

Be it known that I, JOHN W. HYATT, of Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Lead-Pencils, of which the following is a specification.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a side view of a lead-pencil made according to my invention. Fig. 2 is a section of the case of my lead-pencil on a larger scale than the previous figure, showing the manner in which the same is constructed.

Similar letters indicate corresponding parts.

The nature of my invention relates to a lead-pencil the case of which is composed of cord, wire, or other similar flexible material, and it consists in a lead-pencil casing composed of a cord wound to form successive cone-shaped layers with short cylindrical extensions at their smaller ends, the cord being carried back from the end of each cylindrical layer nearly to the commencement of the larger end of the previously-formed conical layer, and being then wound spirally forward to form the next outer conical layer, and its cylindrical extension extending in advance of the end of the previously-formed cylindrical layer, all substantially as hereinafter described.

In carrying out my invention I prepare a core, A, consisting of wire equal in thickness to the leads which are to be incased, said core being provided with a conical head, *a*, as shown in Fig. 2 of the drawings. Round this core I wind a strand, *b*, of cord, thin metal wire, or any other suitable flexible material, using, by preference, paper twine or any other cheap material of the same nature. I commence in winding at the thick end of the head, carrying the strand in a close spiral round said head, and continuing in this operation until four or five rings, *c*, have been placed round the body of the core A close to its junction with the head *a*. Then I carry a portion, *d*, of the strand back to the butt-end of the head and wind a second layer, commencing close to the first ring, *c*, of the lower layer, and I continue to wind until four or five additional rings, *c'*, have been formed on the body of the core beyond the rings *c* first formed. Then I carry again a portion, *d'*, of the strand back to the first

ring, *c'*, of the second layer, and form a third layer in the same manner, until the entire core is filled with the spirally-wound strand. I then immerse the core, together with the case formed thereon, into a solution of glue, or into varnish or any other adhesive material, so that when the core is withdrawn, the various rings of the case will adhere to each other. Before the core is withdrawn, the case, after having been immersed in a solution of glue or other adhesive material, may be subjected to pressure in a suitable mold, so as to impart to the same a hexagonal or other form. When the case is finished and the core has been withdrawn the lead is introduced and fastened in position by glue or other suitable cement, and the butt-end of the case is closed by a plug of wood or other suitable material.

By winding the strand from which my case is made in the manner above described the tip of the case is formed by four or five single rings, *c⁵*, (see Fig. 2,) and the end *d⁴* of the strand is carried back over the outside of the case and fastened by glue or other adhesive material. If the end of the lead protruding from the case has been used up the end *d⁴* of the strand is detached, and by unwinding the rings *c⁵* a fresh part of the lead is exposed. The unwound portion of the strand is cut, and the case is left in the same condition as before, there being always an end, *d*, and four or five single rings, *c*, exposed at its tip end. By this arrangement the operation of sharpening the pencil is materially facilitated.

If the top layer of the cord is cut parallel to the length of the case after the case is finished, the ends *d⁴* *d⁵*, &c., can be drawn off without requiring to be cut.

If a cord is used for the case it may be soaked in glue first, and after having been dried it may be moistened and wound.

My improvement is applicable to slate-pencils, crayons, or any article of a similar nature.

It will be seen that at all times during the use of a pencil-case constructed as described the four or five rings constituting the cylindrical extension of some one of the conical layers will be exposed, such extension being next to the lead. Thus, when that portion of the cylindrical layer at the pencil-point has been cut away the operator then unwinds the

cord forming the conical layer to which said extension belonged, and after unwinding such conical layer a fresh conical layer, with its cylindrical extension, will be exposed.

5 I do not claim, broadly, a holder or handle for lead, pens, &c., formed by spirally-winding strips of paper, cloth, tissue, or cord around a removable core, as such is not new; but

10 What I claim as new, and desire to secure by Letters Patent, is—

A lead-pencil casing composed of a cord wound to form successive cone-shaped layers, with short cylindrical extensions at their smaller ends, the cord being carried back from
15 the end of each cylindrical layer nearly to the

commencement of the larger end of the previously-formed conical layer, and being then wound spirally forward to form the next outer conical layer, and its cylindrical extension extending in advance of the end of the previously-formed cylindrical layer, all substantially
20 as herein described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of February, 1875.

JOHN W. HYATT. [L. s.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.